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# When the Best Defense Is No Defense: The Future of State-of-the-Art Evidence in Product Liability Actions in Missouri

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# WHEN THE BEST DEFENSE IS NO DEFENSE: THE FUTURE OF STATE-OF-THE-ART EVIDENCE IN PRODUCT LIABILITY ACTIONS IN MISSOURI

*Elmore v. Owens-Illinois*[1]

A paint manufacturer develops a quick-drying and inexpensive paint that adheres to virtually any surface. The secret is an additive with exceptional bonding capacity. The manufacturer, a prudent business person, conscientiously studies all the relevant scientific literature to determine whether there are any health hazards associated with the use of the additive. Although she finds no evidence of risk, she cautiously invests in further product safety research. After extensive testing confirms the harmlessness of the additive, the manufacturer produces and markets the paint for ten years and then sells that line of products to another company.

Five years later a report published by a prominent scientist suggests that breathing fumes from paint containing the additive may cause serious lung damage. Another five years pass, and a painter brings a product liability action against the original manufacturer. The painter claims that his lungs have been damaged by inhaling fumes from the paint, and that the paint was defectively designed and unreasonably dangerous.

At trial, should the manufacturer be allowed to argue that the design was not defective and unreasonably dangerous because, given the state of the art at the time of manufacture, the risks associated with the additive were scientifically unknowable? In a recent decision involving a factually similar situation, the Supreme Court of Missouri declared that "state of the art evidence has no bearing on the outcome of a strict liability claim . . . ."[2] This note will examine the *Elmore* decision with particular focus on the majority and dissenting opinions. The note will consider the extent to which the *Elmore* holding as to state-of-the-art evidence promotes the social policies underlying strict liability in tort. Finally, the note will identify those areas of Missouri law in which state-of-the-art evidence should still be admissible.

Arthur Elmore was an asbestos worker from 1943 until 1976. During the years 1948 to 1958, he frequently worked with Kaylo, an insulating material composed of several substances (including fifteen percent asbestos), which was

1. 673 S.W.2d 434 (Mo. 1984) (en banc).
2. *Id.* at 438.

manufactured and distributed by Owens-Illinois. Installing Kaylo required pounding and sawing, often in enclosed areas, and filled the air with dust. In the late 1960's, Elmore learned that working with asbestos could cause asbestosis, an incurable lung disease. In 1973, he began to experience shortness of breath, a symptom of asbestosis, but he was not diagnosed as having asbestosis until May 13, 1976.[3] Although Elmore was a Kansas resident, he filed suit in Missouri, and the trial court applied the statute of limitations and the substantive law of Missouri.[4] The jury returned verdicts of $117,250 for Mr. Elmore and $43,750 for Mrs. Elmore, but the trial court reduced the award. The Court of Appeals, Western District, affirmed the liability of Owens-Illinois and reversed the trial court's reduction of damages.[5] Owens-Illinois appealed, claiming that the trial court erred when it refused to admit defendant's evidence that under the state of the art[6] at the time of manufacture,[7] the defen-

3. *Id.* at 435-36. The court held that his cause of action accrued on the date his doctor made her diagnosis. It was not until that time that the character of his condition (asbestosis) and its cause (breathing asbestos dust) "came together" for Elmore. *Id.* at 436.

4. The statute of limitations was two years in Kansas, KAN. STAT. ANN. § 60-513(a)(4) (1983), and five in Missouri, MO. REV. STAT. § 516.120 (1978). The court held that Elmore's cause of action accrued when and where damages were sustained and capable of ascertainment. In this case, that occurred in Kansas City, Missouri, when his doctor made her diagnosis. *Id.* at 436.

On the substantive law choice issue, the court had previously adopted the rule of RESTATEMENT (SECOND) OF CONFLICT OF LAWS § 145 (1971) for determining the substantive law to be applied in tort cases. Using those guidelines, the court decided that because Elmore's employment was chiefly for Kansas City, Missouri, based employers, out of his Kansas City, Missouri, union, Missouri was the state with the most significant relationship to the occurrence and to the parties. 673 S.W.2d at 437.

5. *Id.* at 438-39. The trial judge reduced the verdicts to $17,250 and $7,750 because affidavits taken from all twelve jurors indicated that they had failed to follow the court's instruction to deduct from the total damages award the sums already received by the plaintiffs from other defendants in settlement. The appellate court reversed the reduction of damages, and the supreme court affirmed the appellate court's holding that the trial judge should not have reduced the award when there was no ambiguity in the verdict and nothing in the record except for the affidavits from the jurors to suggest that the jurors had made a mistake. Under those circumstances, it was improper for the judge to impeach the jury's verdict. *Id.* at 439.

6. The term "state of the art" has been used in a variety of ways. It sometimes refers to the standards of an industry at the time the product was manufactured. *E.g.*, Gelsumino v. E.W. Bliss Co., 10 Ill. App. 3d 604, ____, 295 N.E.2d 110, 113 (1973) (punch press manufacturer not allowed to use state-of-the-art defense to escape liability by showing that he had done "what the rest of [the] industry had done to make their products safe"). In other cases, the term apparently means compliance with governmental regulations. *See, e.g.*, Rucker v. Norfolk & W. Ry., 64 Ill. App. 3d 770, ____, 381 N.E.2d 715, 724 (1978) (tank car's conformity to federally prescribed design standards characterized as "state of the art"), *rev'd. on other grounds*, 77 Ill. 2d 434, 396 N.E.2d 534 (1979). In still other cases, "state of the art" seems to be synonymous with "feasibility" and involves a balancing of costs, safety, scientific knowledge, technological capability, and other factors. *Cf.* Larsen v. General Motors Corp., 391 F.2d 495, 503 (8th Cir. 1968) (manufacturer's duty to design product as safe as rea-

dant could not have known of the product's danger.[8] Owens-Illinois argued that under the design defect theory submitted by the plaintiff, the state-of-the-art defense should be permitted because there can be no defect unless the manufacturer knew or should have known that the product could be designed in a safer manner.[9]

Recognizing that jurisdictions differ on admissibility of state of the art in design defect cases,[10] the majority opinion[11] rejected Owens-Illinois' argument

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sonably possible under the present state of the art). The fourth definition, and the one which seems to have been adopted in Missouri, is the highest level of scientific and technical knowledge existing at the time the product was manufactured and distributed. *See, e.g.,* Cryts v. Ford Motor Co., 571 S.W.2d 683, 689 (Mo. App., E.D. 1978) (Ford argued that it had "built the safest armrest possible under the technology existing in 1957"), *cited with approval in Elmore,* 673 S.W.2d at 438.

The characterization accepted by a court is significant because the use of different definitions may change the standard of care to which a manufacturer will be held. For example, it may be relatively easy for a manufacturer to demonstrate compliance with the general customs of the industry, but difficult to show that a product was manufactured in accordance with the best scientific and technical knowledge available at the time.

7. *Id.* at 437. Owens-Illinois stopped manufacturing Kaylo in 1958 and claimed that prior to that time it could not have learned of the dangers associated with asbestos in insulation products. *Id.* at 437.

8. The courts have taken three basic approaches in defining a defective design. The consumer-expectation approach is set out in RESTATEMENT (SECOND) OF TORTS § 402A (1965) and refers to a "defective design unreasonably dangerous." Comment i defines unreasonably dangerous as "dangerous to an extent beyond that which would be contemplated by the ordinary consumer who purchases it with the ordinary knowledge common to the community as to its characteristics." The Missouri Supreme Court has indicated that it uses this definition of defective condition. *See, e.g.,* Aronson's Men's Stores v. Potter Elec. Signal Co., 632 S.W.2d 472, 474 (Mo. 1982) (en banc). Other courts, using a risk/utility analysis, define defect by balancing the benefits of the allegedly defective design against its risks. *E.g.,* Boatland of Houston, Inc. v. Bailey, 609 S.W.2d 743 (Tex. 1980); Morningstar v. Black & Decker Mfg. Co., 162 W. Va. 857, 253 S.E.2d 666 (1979). The third approach is a combination of the first two. In other words, a product is defective if it fails either the consumer-expectation test or the risk/utility test. *E.g.,* Heritage v. Pioneer Brokerage & Sales, 604 P.2d 1059, 1062 (Alaska 1979); Barker v. Lull Eng'g Co., 20 Cal. 3d 413, ____, 143 Cal. Rptr. 225, ____, 573 P.2d 443, 454-55 (1978).

9. *Id.* at 437. Specifically, Owens-Illinois claimed that the trial court erred in submitting the case to the jury under MISSOURI APPROVED INSTRUCTION (MAI) 25.04 Strict Liability Product—Defect rather than under MAI 25.05 Strict Liability—Failure to Warn. The supreme court held that it is the plaintiff's prerogative to choose the theory upon which his case is to be submitted, so long as that theory is supported by the evidence. *Id.* (citing Robinson v. St. John's Medical Center, 508 S.W.2d 7, 12 (Mo. App., Spr. 1974)). The court characterized the defendant's claim that the case was submitted under the wrong MAI as "a more fundamental assertion: that state of the art should have been permitted by the trial court even under the design defect theory . . . ." *Id.* at 437.

10. *Id.* at 438 (citing Robb, *A Practical Approach to Use of State of the Art Evidence in Strict Products Liability Cases,* 77 NW. U.L. REV. 1, 3-19 (1982)).

11. Written by Judge Higgins; Judges Rendlen, Gunn, Billings, and Blackmar

and stated that Elmore had proved that Kaylo was defective when he proved that it was unreasonably dangerous as designed.[12] That done, the plaintiff did not have to demonstrate that Owens-Illinois was at fault in a negligence sense.[13]

The majority opinion did not offer a lengthy explanation of its reasoning. Instead, it presented the holding as consistent with the principles adopted in earlier Missouri cases dealing with product liability issues.[14]

During the twentieth century, products liability cases generally evolved from actions based on warranty or negligence to actions based on strict liability.[15] Indeed, a number of commentators argue that in some jurisdictions the courts now impose absolute liability on manufacturers, making them, in effect, insurers of their products.[16]

Historically, the move toward strict liability was a response to the difficulties the warranty theory presented plaintiffs who attempted to recover for injuries suffered because of defective products.[17] These problems prompted the drafters of the *Restatement (Second) of Torts* to eliminate the term "warranty" when they composed section 402A (Special Liability of Seller of Product for Physical Harm to User or Consumer) and to impose strict tort liability under certain circumstances.[18] Section 402A reduces the burden of proof for the plaintiff in that he does not have to prove specific acts of negligence, and it protects him from some of the defenses available to the defendant under a warranty theory.[19]

The reasoning of section 402A was first applied in *Greenman v. Yuba Power Products*[20] in 1963. Since that time, the majority of states have adopted the rule of strict product liability as set out in section 402A.[21] Missouri courts have followed this general trend. In 1969, the Missouri Supreme Court, in *Keener v. Dayton Electric Manufacturing Co.*,[22] adopted section 402A as the

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concurring.

12. *Elmore*, 673 S.W.2d at 438.

13. *Id.*

14. *Id.* at 437-38; *see infra* notes 22-33 and accompanying text.

15. W. PROSSER, HANDBOOK ON THE LAW OF TORTS 641 (4th ed. 1971).

16. *See, e.g.*, Robb, *supra* note 10, at 30.

17. *E.g.*, Butaud v. Submarine & Sporting Goods, Inc., 555 P.2d 42, 44 (Alaska 1976); Daly v. General Motors Corp., 20 Cal. 3d 725, ____, 144 Cal. Rptr. 380, ____, 575 P.2d 1162, 1165 (1978); Morningstar v. Black & Decker Mfg. Co., 162 W. Va. 857, 253 S.E.2d 666, 676 (1979).

18. RESTATEMENT (SECOND) OF TORTS § 402A (1965).

19. *See, e.g.*, Daly v. General Motors Corp., 20 Cal. 3d 725, ____, 144 Cal Rptr. 380, ____, 575 P.2d 1162, 1165 (1978) ("Warranty actions . . . [required] a precedent notice to the vendor of a breach of warranty, and [absolved] him from loss if he had issued an adequate disclaimer.").

20. 59 Cal. 2d 57, 27 Cal. Rptr. 697, 377 P.2d 897 (1963).

21. Robb, *supra* note 10, at 9 n.29 (listing 30 states and citing the case in which the rule was adopted).

22. 445 S.W.2d 362 (Mo. 1969).

law of product liability in Missouri.[23]

In *Keener*, the Court listed three reasons for its decision to adopt the rule of strict liability in tort. First, it stated that, as a policy matter, strict liability would insure that the manufacturers who put defective products on the market would bear the costs of injuries caused by such products. The court accepted the *Greenman* conclusion that this result was preferable to the alternative of leaving the costs where they naturally fall—on the victims who are helpless to protect themselves.[24] Second, the court explained that adopting the *Restatement* theory would release Missouri courts from the shackles of warranty language. Finally, it reasoned that adopting section 402A would give the bench and bar a sense of direction in product liability cases.[25] It is the first reason, the policy concern which favors shifting the costs of injuries caused by defective products from the injured person to the manufacturer, that has most influenced subsequent developments in Missouri case law including the decision in *Elmore*.

In 1977, in *Blevins v. Cushman Motors*,[26] the Missouri Supreme Court extended strict liability to include products which are unreasonably dangerous because of design defects in addition to those unreasonably dangerous because of manufacturing defects.[27] The court further set the stage for its later deci-

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23. *Id.* at 365. The widow of Harold Keener brought a wrongful death action against Dayton Electric Manufacturing Co. (Dayton). Her husband had been electrocuted when he lifted a Dayton sump pump out of ankle deep water in his friend's basement. Keener alleged that the pump was defective because it was not equipped with a ground wire or an overload protector. After adopting section 402A, the court remanded the case for retrial, specifically holding that Dayton, a wholesale distributor, could be held liable for Keener's death if the jury found that "the pump, as sold by Dayton, was defective and therefore dangerous when put to a *use reasonably anticipated*, and that it was used by Harold Keener in a *manner reasonably anticipated*." *Id.* at 363-64 (emphasis in original).

24. *Keener*, 445 S.W.2d at 364 (quoting *Greenman*, 377 P.2d at 901).

25. *Id.* at 366.

26. 551 S.W.2d 602 (Mo. 1977) (en banc). In *Blevins*, the plaintiff and his wife sued for personal injuries suffered when the golf cart in which the plaintiff was a passenger overturned. They alleged that the golf cart was defective and unreasonably dangerous because its stability could have been improved in several specific ways. *Id.* at 608.

27. Generally a product defect will be one of three types. A manufacturing defect is a flaw that unintentionally develops during the construction or marketing process and makes one particular item more dangerous than similar items which meet the manufacturer's standards. For example, a weak spot that causes a tire to blow out is a manufacturing defect.

In a failure-to-warn defect, the product, which is made as the manufacturer intended, may be safe if used in one way but dangerous if used in another. The product is defective only if it is not accompanied by an adequate warning. Rubbing alcohol, for instance, is safe for external use, but would probably be defective if the manufacturer did not warn consumers of the dangers of ingesting it.

The third type is the design defect. Here the product is manufactured in accordance with design specifications, but courts later determine that the product is so dangerous that liability should attach. For a discussion of the tests used to determine

sion in *Elmore* by explaining the distinction between negligence and strict liability in defective design cases. The court noted that in negligence actions the emphasis is on the foreseeability of harm or injury while strict liability theory focuses on the foreseeability of the use of the product.[28] In other words, the issue in negligence is the reasonableness of the manufacturer's actions in designing the article, but in strict liability the issue is the dangerousness of the article designed in a particular way.[29] Negligence is concerned with the conduct of the manufacturer, strict liability with the unreasonably dangerous defect of the product.

The next major step was taken by the Missouri Court of Appeals, Eastern District, in the following year. In *Cryts v. Ford Motor Co.*,[30] a car driver, who was paralyzed in a collision with a second car, sued the manufacturer of his own vehicle on a strict liability theory, claiming that his back was broken by a defectively designed armrest when he was thrown against the car door during the collision.

Ford argued that it had built the safest armrest possible under the technology existing in 1957. The court held that such a state-of-the-art defense had "no bearing on the outcome of a strict liability claim, where the sole subject of inquiry is the defective condition of the product and not the manufacturer's knowledge, negligence, or fault."[31] The court further stated that even if the argument were relevant, it was not supported by the evidence.[32]

In summarizing *Keener, Blevins*, and *Cryts*, the majority opinion in *Elmore* suggested that rejection of the state-of-the-art defense in design defect cases was the reasonable result of adhering to established case law. Two judges, however, disagreed strongly in separate opinions.[33]

In his dissenting opinion, Judge Welliver argued that the plaintiff's evidence supported a failure-to-warn case rather than a design defect case, that the case should have been submitted under MAI 25.05,[34] and that, consequently, Owens-Illinois should have been allowed to introduce state-of-the-art evidence to explain its inability to warn of dangers not scientifically discoverable at the time of manufacture.[35] Judge Welliver contended that denying Owens-Illinois such an opportunity to defend itself makes manufacturers insurers and imposes absolute rather than strict liability.[36]

Most of Judge Donnelly's dissent consists of his quotation of section 402A

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whether a design is defective, see *supra* note 8.

28. *Blevins*, 551 S.W.2d at 607.
29. *Id.* at 608 (quoting Phillips v. Kimwood Mach. Co., 269 Or. 485, ____, 525 P.2d 1033, 1037 (1974) (en banc)).
30. 571 S.W.2d 683 (Mo. App., E.D. 1978).
31. *Id.* at 689.
32. *Id.*
33. *Elmore*, 673 S.W.2d at 435.
34. *See supra* note 9.
35. 673 S.W.2d at 439-40 (Welliver, J., dissenting).
36. *Id.* at 440.

and related comments.[37] Donnelly contended that the majority ignored the concerns articulated in those comments by forbidding consideration of evidence which was relevant to the question of whether the product, Kaylo, was unreasonably dangerous.[38] He argued that the majority's holding as to the nonadmissibility of state-of-the-art evidence had, in effect, amended section 402A so that a seller could be held liable for a product in a defective condition that causes injury to a consumer or user even though there is no showing that the product was "unreasonably dangerous."[39] Both dissenting judges concluded that the case should have been reversed and remanded so that the jury could compare the fault of the parties as mandated by the supreme court in *Gustafson v. Benda.*[40]

The major problem with the *Elmore* decision is that it significantly expands the scope of liability for manufacturers without explaining sufficiently the policy considerations prompting that expansion. Although the majority apparently believed that their decision was merely the logical consequence of following firmly established case law,[41] there are two reasons why those earlier cases need not have led to the decision reached by the majority. First and most obvious, the *Cryts* case was decided by an appellate court and thus was not binding on the Missouri Supreme Court.[42] Second, and perhaps less obvious, the kind of state-of-the-art evidence offered by Ford in *Cryts* was entirely different from that offered by Owens-Illinois.

State of the art generally becomes an issue when there is a significant difference between what was known about a product at the time it was distributed and what is known about it at the time of trial.[43] The change in knowledge which occurs can be either of two types. In some instances, between the time of distribution and the time of trial, a scientific or technological development occurs which makes it possible to eliminate a risk that was known at the time of distribution.[44] In other situations, state of the art at the time of trial

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37. *Id.* at 441-43 (Donnelly, J., dissenting) (discussing section 402A comments i, j, k, and n).

38. *Id.* at 442.

39. *Id.* at 443.

40. 661 S.W.2d 11 (Mo. 1983) (en banc) (adopting the Uniform Comparative Fault Act § 1-6). Comparative fault went into effect on January 31, 1984, *supra* note 20 and accompanying text, after the trial court and appellate court decisions in *Elmore* had been handed down but before the supreme court decision in *Elmore.* In *Gustafson,* the court said, "Except for the instant case and interim cases where the parties can mutually agree, comparative fault shall apply only in cases in which trial begins after the date of publication of this opinion in the advance sheets of the Southwestern Reporter." *Id.* at 15.

41. *Elmore,* 673 S.W.2d at 437-38.

42. *Cryts* was decided by the Missouri Court of Appeals, St. Louis District. The opinion was written by Judge Gunn, who is now a member of the Missouri Supreme Court and who concurred with the *Elmore* majority opinion.

43. *See* Wade, *On the Effect in Product Liability of Knowledge Unavailable Prior to Marketing,* 58 N.Y.U. L. REV. 734, 751 (1983).

44. *See, e.g.,* Boatland of Houston, Inc. v. Bailey, 609 S.W.2d 743, 746-47

makes it possible to be aware of a risk that was not scientifically knowable at the time of distribution.[45] The distinction is between failure to know of a safer alternative and failure to know of the hazard presented by the product.

The state-of-the-art evidence Ford wanted to present as a defense in *Cryts* was of the first type. At the time the car was manufactured and distributed, it was scientifically knowable that a person thrown against a thinly padded arm rest during a collision could be injured. Consequently, the issue was whether feasible, safer design alternatives were available.[46] Thus, the narrow holding of *Cryts* is that state-of-the-art evidence regarding the feasibility of alternative designs at the time of distribution is irrelevant in a strict liability design defect case.[47]

In *Elmore*, on the other hand, the central issue was not the feasibility of a safer design for Kaylo.[48] Instead, the question was whether, at the time Kaylo was produced, it was scientifically knowable that the low level of asbestos to which insulation workers ordinarily are exposed could cause asbestosis.[49] The court did not discuss the fact that the state-of-the-art evidence in *Elmore* concerned an unknowable risk while that in *Cryts* involved the feasibility of alternative designs. Either the court failed to note the distinction or it considered the difference unimportant.[50]

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(Tex. 1980) (safety device known as a kill switch would cut off motor of bass boat if the driver fell out).

45. *See, e.g.*, Feldman v. Lederle Laboratories, 97 N.J. 429, 479 A.2d 374 (1984) (knowledge that tetracycline administered to babies can cause tooth discoloration).

46. *Cryts*, 571 S.W.2d at 689.

47. *Id.*

48. There was a factual dispute concerning the feasibility of manufacturing Kaylo without asbestos, but the trial focused on whether it was possible to know the dangers of asbestos.

49. The supreme court's statement that state of the art is irrelevant in a design defect case might lead the reader to believe that Owens-Illinois was not permitted to present such evidence at trial. On the contrary, both the plaintiff and the defendant presented extensive evidence relating to the level of scientific knowledge available at the time Kaylo was manufactured. The judge admitted the evidence in relation to the issues of negligent failure to warn and of punitive damages, but refused to allow the jury to consider state of the art in connection with the strict liability defective design action. Record at 1063-70.

50. The distinction is significant for a number of reasons. If a product presents a known but justifiable risk, the manufacturer has several options. The manufacturer can issue a warning that will lessen the risk (such as "Caution. Fumes from this product are dangerous. Use only in a well ventilated area."). Second, the manufacturer can intensify research intended to develop a safer product, such as a more crashworthy car. Third, the manufacturer can estimate the amount of liability it is likely to incur as the result of damage claims brought by injured consumers, and can raise the price of the product accordingly. For example, a bottler who knows that one in every ten thousand bottles will explode for no apparent reason can estimate the amount of compensation that will be required. But, as will be discussed later, if the danger presented by the product is unknowable, none of these options is available to the manufacturer.

In one way, the court's decision to make the manufacturer liable for scientifically unknowable risks is not surprising. Such a ruling is at least consistent with Missouri's test for a defective design that is unreasonably dangerous.[51] In Missouri, the plaintiff in a strict liability design defect case must prove that: 1) the defendant sold the product in the course of his business; 2) the product was then in a defective condition[52] unreasonably dangerous[53] when put to a reasonably anticipated use;[54] 3) the product was used in a manner reasonably anticipated; and 4) the plaintiff was damaged as a direct result of such defective condition as existed when the product was sold.[55]

Because it is not necessary to prove that the manufacturer knew or could have known that the product was in a defective condition unreasonably dangerous, neither the fact that the risk is scientifically unknowable nor the fact that no safer design is feasible is relevant as to the manufacturer's standard of care. Those issues should, however, be relevant in determining whether the product is defective.[56]

In Missouri, the consumer-expectation test articulated in section 402A determines whether a given product is defectively designed. In other words, a defective and unreasonably dangerous product is one "which is dangerous to an extent beyond that which would be contemplated by the user with the ordinary knowledge common to the community."[57] If the consumer-expectation test is strictly applied, state-of-the-art evidence is usually irrelevant[58] because the question is simply, "Would the typical consumer recognize the danger presented by the car's armrest or by the amount of asbestos in Kaylo?"

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51. *Blevins*, 551 S.W.2d at 607 (defective design that is unreasonably dangerous equated with "defective and dangerous when put to a use reasonably anticipated" by the manufacturer).

52. The courts have recognized that it is possible for a product to be defective but not unreasonably dangerous so as to support a cause of action under a strict liability theory. *E.g.*, Aronson's Men's Stores v. Potter Elec. Signal Co., 632 S.W.2d 472, 474 (Mo. 1982) (en banc) (burglar alarm may not have rendered reasonable level of performance but did not explode, ignite, or cause harm to property and therefore was not in any sense dangerous).

53. The unreasonably dangerous element is the same for manufacturing defects, design defects, and inadequate warnings.

54. Presumably, the term "reasonably anticipated use" is meant to be broader than "intended use." *Cf.* Lewis v. Bucyrus Erie, Inc., 622 S.W.2d 920 (Mo. 1981) (en banc) (defendant argued that lifting personnel with a crane was not an anticipated use).

55. These elements are set forth in MISSOURI APPROVED JURY INSTRUCTIONS (MAI) 25.04 Verdict Directing—Strict Liability—Product Defect [1978 Revision].

56. *See* Robb, *supra* note 10, at 16.

57. *See, e.g.*, St. Louis-S.F. Ry. v. Armco Steel Corp., 359 F. Supp. 760, 762 (1973) (applying Missouri law), *rev'd. in part*, 490 F.2d 367 (8th Cir.), *cert. denied*, 417 U.S. 969 (1974).

58. *But see* Bruce v. Martin-Marietta Corp., 544 F.2d 442, 447 (10th Cir. 1976) (allowing admission of defendant's state-of-the art evidence to help determine whether "the ordinary consumer would expect a plane made in 1952 to have the same safety features of one made in 1970").

The most significant question presented by *Elmore* is not whether the holding is consistent with Missouri's consumer-expectation test but whether Missouri courts should continue to use consumer expectation as the exclusive test for defective design. Missouri courts have frequently indicated that strict liability is not absolute liability and that the manufacturer is not an insurer who will be held liable for every mishap that occurs in connection with its products.[59] Instead, the manufacturer is held liable only if the product is both defective and unreasonably dangerous.[60] If the requirement of an unreasonably dangerous defect is meant to limit the manufacturer's liability to some extent (and there is no other apparent reason for the requirement), then the definition of unreasonably dangerous defect should be used to advance the policy considerations underlying strict liability.[61] A careful examination of those policy considerations shows the inadequacy of the consumer-expectation test.

When the Missouri Supreme Court first adopted strict liability in *Keener* sixteen years ago, the social policy the court emphasized was the desirability of shifting the burden of injury from the innocent consumer to the manufacturer who could spread the cost among all consumers who benefit from the product. This goal of risk spreading has continued to influence the court.[62]

The connection between this goal and the use of consumer expectation to define defect is based on the assumption that the consumer has a right to rely on the *apparent* safety of the product marketed.[63] The corollary view is that if the customer is aware of the risk presented by the product (either because the risk is obvious or because the manufacturer has given an adequate warning), it would be unjust to hold the manufacturer liable, presumably because the consumer could have taken steps to protect against a known danger.

The consumer-expectation test was articulated in section 402A twenty years ago. During the intervening years, the inadequacies of that test have become increasingly apparent, and a number of courts no longer rely on it as the sole test of defective design.[64]

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59. Abnormal use of the product has been held to bar recovery regardless of alleged design defects. *E.g.,* Baker v. International Harvester Co., 660 S.W.2d 21 (Mo. App., E.D. 1983) (unannounced and unexpected boarding of combine ladder by hunter while holding a gun).

60. Leitz v. Snyder Mfg. Co., 475 S.W.2d 105, 109 (Mo. 1972) (gym bar which collapsed when son was hanging from it).

61. *See* Fischer, *Products Liability—The Meaning of Defect,* 39 MO. L. REV. 339, 359 (1974).

62. *Elmore*, 673 S.W.2d at 438; *Cryts*, 571 S.W.2d at 687.

63. *See* Prosser, *The Assault Upon the Citadel (Strict Liability to the Consumer)*, 69 YALE L.J. 1099, 1123 (1960).

64. Several courts use the risk/utility test. *E.g.,* O'Brien v. Muskin Corp., 94 N.J. 169, ____, 463 A.2d 298, 304 (1983) (risk/utility analysis based on policy judgment that some products are so dangerous that they create a risk of harm outweighing any usefulness); Morningstar v. Black & Decker Mfg. Co., 253 S.E.2d 666, 681 (W. Va. 1979) (product is defective if not reasonably safe for its intended use).

Other courts take the position that a product can be defective if it fails either of two alternative tests: the consumer-expectation test or the risk/utility test. *E.g.,* Heri-

One problem with the consumer expectation test if it is interpreted strictly is that the consumer can never recover for an injury suffered as the result of a defective design involving an obvious risk.[65] That result may be just in some instances. Certainly a consumer who is cut while using a sharp knife should not hold the manufacturer responsible for the consumer's carelessness. On the other hand, the balance of equities changes when the manufacturer distributes a complex and expensive machine which could be made much safer with the addition of a relatively inexpensive safety device.[66] It seems unfair to conclude that the manufacturer who chooses not to include that safety feature is free from liability simply because the customer knew of the obvious risk. The unfairness is particularly obvious when the customer's knowledge of the risk nevertheless offers no meaningful opportunity to avoid it.[67]

Another problem with the consumer-expectation test is that it is often difficult to determine exactly what the consumer's expectations are. Frequently, the consumer knows nothing about the safety or danger of a particular product. If the ordinary consumer would have no expectation as to the risk involved, it is almost impossible for a jury to use that standard in determining whether the design was defective.[68]

Probably the major flaw in the consumer-expectation approach is that it is too simplistic; it focuses on only one of many factors that should be considered to further the social policies promoted by the doctrine of strict liability in tort.[69] Consequently, many scholars now advocate some form of risk/utility test in determining whether a product is defective.[70] A jury that is asked to use the risk/utility test must consider all the relevant factors and decide whether the benefit of the product as designed outweighs its risk. If the benefit

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tage v. Pioneer Brokerage & Sales, Inc., 604 P.2d 1059, 1062 (Alaska 1979); Barker v. Lull Eng'g Co., 20 Cal. 3d 413, ____, 143 Cal. Rptr. 225, ____, 573 P.2d 443, 454-55 (1978).

65. *See* Stevens v. Durbin-Durco, Inc., 377 S.W.2d 343 (Mo. 1964) (manufacturer not obligated to provide a protective device to prevent injury from a patent peril or a source manifestly dangerous). *But see* McGowne v. Challenge-Cook Bros., Inc., 672 F.2d 652, 664 (8th Cir. 1982) (applying Missouri law) ("The issue is not whether a jury can conclude that the danger is obvious or apparent, but is whether the jury can conclude that the danger is obvious and apparent to the extent that the product was not unreasonably dangerous.").

66. *See* Keeton, *The Meaning of Defect in Products Liability Law—A Review of Basic Principles,* 45 MO. L. REV. 579, 590 (1980).

67. Industrial machinery is involved in many instances. In that situation, it is the employer who decides which machines to buy. The employees who operate obviously dangerous machines have little choice. They take their chances or they seek other employment.

68. *See* Keeton, *supra* note 66, at 591.

69. *See* Fischer, *supra* note 61, at 359 (listing thirteen factors, including knowledge of risk, which the court should consider in deciding when to impose strict liability).

70. *See* Keeton, *supra* note 66, at 592; Fischer, *supra* note 61, at 358.

outweighs the risk, the product is not defective.[71]

At first glance this test seems to inject the principles of negligence into a strict liability action. But as scholars Keeton[72] and Wade[73] have indicated, it differs because in a negligence action the question is whether a reasonable manufacturer should have known of the risk when the product was distributed. On the other hand, in a strict liability action, knowledge of the risk is imputed to the manufacturer. Then the question is whether the manufacturer, knowing the risk presented by the product, was nonetheless justified in marketing it.[74]

Courts that use the risk/utility analysis generally admit state of the art evidence to establish the level of knowledge that should be imputed to the manufacturer.[75] Because the manufacturer is held to the level of an expert,[76] it is assumed that the manufacturer was aware of all research related to possible risks presented by the product.

Even if a court decides to admit state-of-the-art evidence, it must determine additionally whether the relevant state-of-the-art is that which existed at the time of distribution or that which exists at the time of trial.[77] Both courts and scholars disagree on this issue,[78] but a careful examination of the social policies involved suggests that, at least in regard to scientifically unknowable risks, it would be better to consider state of the art at the time of distribution.

Four significant policy considerations exist. The first is that of risk spreading.[79] Those who advocate imputing to the manufacturer state-of-the-art knowledge available at the time of trial usually stress this goal. They argue that the manufacturer is in a better position than the injured person to bear the financial burden caused by the injury because the manufacturer can spread the loss by raising the price of the product or by purchasing product

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71. *See, e.g.*, Boatland of Houston, Inc. v. Bailey, 609 S.W.2d 743, 746 (Tex. 1980).

72. *See* Keeton, *Products Liability—Inadequacy of Information*, 48 TEX. L. REV. 398, 403-04 (1970).

73. *See* Wade, *On the Nature of Strict Tort Liability for Products*, 44 MISS. L.J. 825, 834-35 (1973).

74. For example, thousands of Americans are killed or injured in automobile accidents each year, and yet most of us believe that the benefits of cars outweigh their risks.

75. *See, e.g., Boatland*, 609 S.W.2d at 746.

76. Brown v. Raux Distrib. Co., 312 S.W.2d 758, 763 (Mo. 1958).

77. *See* Wade, *supra* note 43, at 753.

78. Favoring time of trial: Beshada v. Johns-Manville Prods. Corp., 90 N.J. 191, 447 A.2d 539 (1982); Keeton, *Product Liability and the Meaning of Defect*, 5 ST. MARY'S L.J. 30, 37-38 (1973). Favoring time of manufacture or distribution: Heath v. Sears, Roebuck & Co., 123 N.H. 512, 464 A.2d 288 (1983); O'Brien v. Muskin Corp., 94 N.J. 169, 463 A.2d 298 (1983); Boatland of Houston, Inc. v. Bailey, 609 S.W.2d 743 (Tex. 1980); Morningstar v. Black & Decker Mfg. Co., 162 W. Va. 857, 253 S.E.2d 666 (1979); Wade, *supra* note 43, at 760.

79. Byrne, *Strict Liability and the Scientifically Unknowable Risk*, 57 MARQ. L. REV. 660, 663 (1974).

liability insurance.[80] This argument is persuasive if the manufacturer knows of the risk. The issue is quite different, however, when the existence of the risk is scientifically unknowable at the time of distribution. In that case, it is impossible to anticipate either the scope or the severity of the risk. If the manufacturer cannot estimate the cost of compensating unknown numbers of victims for unknown injuries, the manufacturer can not pass on those costs to consumers by raising prices.[81] Furthermore, the skyrocketing cost of product liability insurance[82] and other insurance problems[83] may make it impossible to buy protection against unknown dangers. Even scholars who generally advocate expansion of the manufacturer's liability concede that the result may be an increase in the price of products and the disappearance from the market of some beneficial and inexpensive but relatively unsafe products.[84]

The second important policy underlying strict liability is the goal of product safety. Those who would impute knowledge at the time of trial to the manufacturer point out that the amount of money the industry has invested in research primarily determines state of the art at any given time.[85] Thus, making manufacturers liable for unknown hazards should promote safety by encouraging industry to devote more resources to the discovery and elimination of those risks.[86]

Others, however, contend that the opposite result occurs. If "defect" is not defined at the time of distribution, then the manufacturer incurs liability as soon as a formerly unknowable risk is discovered or as soon as a safer, alternative design becomes feasible. Consequently, the manufacturer may be reluctant to conduct further research. Worse yet, there may be an economic incentive to conceal important discoveries to avoid liability for products already distributed.[87]

A third policy concern that should be mentioned is the need to simplify litigation. Obviously, it is easier for a jury to determine what is known about a product's risks at the time of trial than to decide what was knowable at the time of distribution. There is some concern that conflicting expert testimony about what could have been known at an earlier time will be unnecessarily

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80. Beshada v. Johns-Manville Prods. Corp., 90 N.J. 191, 205, 447 A.2d 539, 547 (1982).

81. *See* Wade, *supra* note 43, at 755; *see also* Byrne, *supra* note 79, at 674.

82. *See generally* Note, *Various Risk Allocation Schemes Under the Model Uniform Product Liability Act: An Analysis of the Statute of Repose, Comparative Fault Principles, and the Conflicting Social Policies Arising From Workplace Product Injuries*, 48 GEO. WASH. L. REV. 588, 588-93 (1980).

83. *See* Fischer, *supra* note 61, at 361 ("In design defect cases the entire line is defective. When the insurance company learns the details of the first accident and that serious future accidents are likely to occur, it will cancel the policy. The manufacturer then pays the cost of subsequent accidents.").

84. Keeton, *supra* note 72, at 402.

85. *Beshada*, 90 N.J. at 208, 447 A.2d at 548.

86. *Id.*

87. Wade, *supra* note 43, at 755.

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confusing.[88] In negligence actions, however, the jurors are expected to determine what the manufacturer knew or should have known at the time the allegedly culpable conduct occurred.[89] That expectation has not presented insurmountable difficulties in negligence cases[90] and should not cause excessive confusion in strict liability. In any event, expediency alone should not justify the time-of-trial position.

The final concern is that of fairness. Those who advocate the use of state of the art available at the time of trial usually focus on fairness to the victim. In a case involving an unknowable risk, they conclude that, as between two innocent parties—the manufacturer and the consumer—it is fair to shift the financial burden to the party who caused the injury.[91] Those who favor admission of state of the art available at the time of distribution stress fairness to the manufacturer and to society as a whole. They argue that manufacturers should not be forced into bankruptcy merely because they had the misfortune of producing dangerous products at a time when those dangers were scientifically unknowable.[92] They also question the wisdom of a policy that may cause certain high-risk but very beneficial products to become unavailable to those who need them.[93]

It seems that the fairest approach is that taken recently by the New Jersey Supreme Court in *Feldman v. Lederle Laboratories*.[94] In a prior strict liability warning case,[95] the New Jersey court ruled that the defendants could not introduce state-of-the-art evidence supporting their claim that the health hazard arising from exposure to insulation products containing asbestos was scientifically undiscoverable until the 1960's.[96] Two years later, however, in *Feldman*, the court apparently changed its position. Feldman, a young woman whose teeth were badly discolored by a tetracyline drug administered to her when she was a baby, sued the manufacturer, Lederle, for failing to warn of the drug's side effects.[97] Although the Court expressly declined to overrule *Beshada*, it held that "as to warnings, generally conduct should be measured by the knowledge at the time the manufacturer distributed the product."[98] There is currently some confusion about the relationship between *Beshada* and *Feldman*. It may be that the *Beshada* ruling is limited to asbestos cases or that the *Feldman* holding is limited to drug cases.[99] Regardless, the value of

88. *Beshada*, 90 N.J. at 207-08, 447 A.2d at 548.
89. Wade, *supra* note 43, at 754.
90. *Id.*
91. *Beshada*, 90 N.J. at 209, 447 A.2d at 549.
92. *See* Robb, *supra* note 10, at 31-32.
93. *See id.*
94. 97 N.J. 429, 479 A.2d 374 (1984).
95. Beshada v. Johns-Manville Prods. Corp., 90 N.J. 191, 447 A.2d 539 (1982).
96. *Id.* at 209, 447 A.2d at 549.
97. *Feldman*, 479 A.2d at 377.
98. *Id.* at 386.
99. Darnell & Placitella, *The* Beshada *Case: How Has It Affected the Defense of Toxic Torts?* TRIAL, November 1984, at 52, 54.

the *Feldman* case is that it offers a remarkably balanced and rational approach to the complex issue of state of the art. The *Feldman* approach attempts to be fair to both the manufacturer and the consumer. It does this in two ways: 1) the defendant is allowed to present evidence that the risk created by the product was scientifically unknowable at the time of distribution (fairness to the manufacturer);[100] and 2) the burden of proving the lack of knowledge is on the defendant who is in a better position to know of the information available in the particular field involved (fairness to the consumer).[101]

The effect of proving such state-of-the-art evidence is not entirely clear. The New Jersey Supreme Court seems to be saying that state-of-the-art would have one effect in cases involving the feasibility of safer, alternative designs. Thus, proving that the risk was unknowable at the time of manufacture is an affirmative defense, but proving that no safer alternative was feasible is merely one factor to consider in a balancing of risks and benefits.[102]

Although the *Elmore* holding was consistent with Missouri's consumer-expectation test, the majority opinion apparently considered only one social policy, that of risk spreading, when deciding the case. Future cases based on different fact situations may lead the court to consider other important policies and perhaps to abandon or expand the consumer-expectation approach. If that occurs, the Missouri courts would do well to consider the fairness achieved by the *Feldman* decision. *Elmore* is now the law of Missouri on state-of-the-art evidence and has already been applied in at least one appellate decision.[103]

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100. *Feldman*, 479 A.2d at 386.

101. *Id.* at 386.

102. *Id.* at 389. In O'Brien v. Muskin Corp., 94 N.J. 169, 463 A.2d 298 (1983), the critical question was whether a swimming pool design using a vinyl liner in a pool four feet deep was defective. The court said that, " 'state-of-the-art' at the time of manufacture" is one of the factors which should be considered in a risk/utility analysis. *Id.* at 305. It further stated, "[a]lthough state-of-the-art evidence may be dispositive on the facts of a particular case, it does not constitute an absolute defense apart from risk-utility analysis. . . .[t]hat is, a product may embody the state-of-the-art and still fail to satisfy the risk-utility equation." *Id.*

In *Feldman*, the court said that "state of the art and available knowledge" are relevant factors in measuring reasonableness of conduct. 479 A.2d at 386. Presumably, if the manufacturer could not have known the risk because it was scientifically undiscoverable, it was not unreasonable to market the product. Furthermore, the court approves with only slight modification the trial court's instruction:

> [I]f the defendant did not know of the danger of tooth discoloration, and if the application of reasonably developed human skill and foresight consistent with the state of the art and the knowledge of the scientific community existing during the periods in question would not have alerted defendant to the danger, then there would have to be a finding for the defendant.

*Id.* at 380, 389.

Arguably, under Missouri's comparative fault system, scientific unknowability would not be an affirmative defense but merely a factor to consider in apportioning damages. *See supra* notes 131-38 and accompanying text.

103. Johnson v. Hannibal Mower Corp., 679 S.W.2d 884 (Mo. App., W.D. 1984) (lawn mower manufacturer not allowed to introduce evidence of voluntary com-

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The final section of this note considers the effect of the *Elmore* holding on other areas of Missouri law. The majority specifically held that "a state of the art defense is irrelevant in a design defect case."[104] But the question remains: When, if ever, will state-of-the-art evidence be admissible in a products liability action?

The court in *Elmore* specifically precluded the use of state-of-the-art evidence as a defense to a strict liability design defect action. Yet the court did not consider whether such evidence would be admissible under a negligence theory. The majority suggested, at least indirectly, that the defense would be available in such a case. The majority rejected state-of-the-art evidence because it relates to the manufacturer's fault and fault is not the issue in a strict liability action.[105] But fault is precisely the issue in a negligence action, and state of the art is directly related to the reasonableness of the manufacturer's design choice.[106]

For similar reasons, state-of-the-art evidence should be relevant under a negligent failure-to-warn theory.[107] MAI 25.06 requires the plaintiff to prove that the defendant "knew or by using ordinary care could have known of such dangerous condition" and to prove that the defendant "failed to warn of such dangerous condition."[108] Certainly evidence that the danger was scientifically unknowable at the time would be relevant in determining what the defendant could have known. At the trial court level of *Elmore*, after the plaintiff presented evidence intended to support the theory that Owens-Illinois had been negligent in failing to warn of the dangers of Kaylo, the judge permitted Owens-Illinois to present evidence that the dangers of exposure to the small amounts of asbestos found in insulation products were unknown at the time that Owens-Illinois manufactured Kaylo. Although the plaintiff ultimately decided to submit the case as a design defect rather than a failure to warn, apparently the judge believed that state-of-the-art evidence would have been relevant in a negligence action.

Such evidence definitely should be allowed in cases involving unavoidably unsafe products. Section 402A comment k[109] excepts from strict liability those products which "in the present state of human knowledge, are quite incapable of being made safe for their intended and ordinary uses" and yet bring enormous benefit to society. The example mentioned by the drafters is the vaccine used in the Pasteur treatment of rabies. The comment explains that, because

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pliance with standards adopted within the power mower industry to rebut evidence that mower was defective or unreasonably dangerous).

104. *Elmore*, 673 S.W.2d at 435.

105. *Id.* at 438.

106. *Id.*

107. *See* Robb, *State of Art Evidence in Missouri*, 40 J. MO. BAR 471, 475 (1984) (arguing that, according to the court's own analysis in *Elmore*, state of the art is relevant to a manufacturer's negligence).

108. MISSOURI APPROVED INSTRUCTIONS 25.06 [1978 Revision].

109. RESTATEMENT (SECOND) OF TORTS § 402A (1965).

the benefit outweighs the risk, the product, properly prepared and accompanied by adequate directions and warning, is neither defective nor unreasonably dangerous. Presumably, then, Missouri would allow a defendant to present state-of-the-art evidence to prove that the product is presently incapable of being made safe for its intended use.

The unavoidably unsafe exception has been construed quite narrowly in Missouri.[110] Owens-Illinois did not argue that asbestos is an unavoidably unsafe product so the court did not address that issue in *Elmore.*

State-of-the-art evidence should also be admissible when the plaintiff requests punitive damages.[111] In Missouri, the jury can award punitive damages in a strict liability case if it finds that at the time the defendant sold the product he knew of its defective condition and danger *and* that he thereby showed complete indifference to or conscious disregard for the safety of others.[112] If the plaintiff attempts to show that the defendant knew of the danger, the defendant should be allowed to introduce state-of-the-art evidence to prove that he could not have known of a danger that was unknowable at the time.[113] In fact, because Elmore requested punitive damages, the trial judge did allow Owens-Illinois to present state-of-the art evidence as to that issue.[114] The jury did not award punitive damages, and that issue was not appealed.

Yet another instance in which it seems fair to allow state-of-the-art evidence involves Missouri's wrongful death statute.[115] Section 537.090 lists factors to be considered by the jury in determining damages and states specifically that "[t]he mitigating or aggravating circumstances attending the death may be considered by the trier of facts." Unfortunately, there are no Missouri cases defining "mitigating" circumstances. It would, however, seem logical to allow the jury to consider as a mitigating circumstance the fact that at the time the defendant manufactured and distributed the product, the dangerous defect was scientifically unknowable.[116]

Allowing such evidence in determining damages would not be inconsistent

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110. Racer v. Utterman, 629 S.W.2d 387, 393-95 (Mo. App., E.D. 1981) (holding that surgical drape which caught fire during surgery is an unavoidably unsafe product but manufacturer can still be liable for failure to warn because surgical drape does not fall within § 402A comment j exemption), *cert. denied and appeal dismissed sub. nom.* Racer v. Johnson & Johnson, 459 U.S. 803 (1982); *cf. Blevins*, 551 S.W.2d at 608 (golf cart not an unavoidably unsafe product).

111. Missouri has standardized jury instructions specifically relating to punitive (exemplary) damages in strict liability product defect actions. *See* MISSOURI APPROVED INSTRUCTIONS (MAI) 10.04-.05 [1983 Revision].

112. MAI 10.04-.05.

113. Sturm, Ruger & Co. v. Day, 594 P.2d 38 (Alaska 1979), *cert. denied,* 454 U.S. 894 (1981).

114. *See supra* note 49.

115. MO. REV. STAT. § 537.090 (1978).

116. If aggravating circumstances permit the jury to increase the damage award, then mitigating circumstances should, of course, allow the jury to reduce the award.

with the court's decision to exclude it in determining liability.[117] Procedurally, this could be accomplished either with a two-part trial, the first to determine liability and the second to assess damages,[118] or by giving jury instructions with the appropriate limitations. Either arrangement would allow an accommodation between the holding of *Elmore* and the language of the statute.

The most complex issue yet to be decided in Missouri concerns the admissibility of state-of-the-art evidence in cases that involve both strict liability and comparative fault. In *Gustafson v. Benda*,[119] the Missouri Supreme Court adopted a "pure" system of comparative fault that went into effect on January 31, 1984, the date of *Gustafson*'s publication in the advance sheets.[120] In that decision, the court did not specifically discuss the applicability of comparative fault to strict liability actions, but the court did state that "insofar as possible" future cases would apply the doctrine of comparative fault in accordance with the Uniform Comparative Fault Act and the court attached a copy of the UCFA to its opinion.[121]

The UCFA clearly provides that the "fault" of the various parties is to be compared in strict liability actions. Section 1 of the UCFA defines fault as acts or omissions that are negligent or reckless, or that subject a person to strict liability in tort.[122] However, a serious question remains as to whether, if faced squarely with the issue, the Missouri Supreme Court would apply the provisions of the UCFA to strict liability actions.

For example, it has been argued that the supreme court will not compare fault in strict liability cases involving ordinary contributory negligence because the UCFA approach is directly contradictory to prior Missouri case law.[123] In the comments to Section 1 of the UCFA, the commissioners explain that contributory fault diminishes recovery whether it was previously a bar or not, as in the case of ordinary contributory negligence in an action based on strict liability.[124] In contrast, in *Keener*, the case in which Missouri adopted strict liability in tort as set forth in section 402A, the Court stated that "contributory negligence, as we ordinarily apply it, is not a defense in strict liability."[125] Rather than overturn existing case law, the court might decide that the *Gustafson* "insofar as possible" caveat allows the Court to depart from the UCFA

117. *Cf.* Welch v. F.R. Stokes, Inc., 555 F. Supp. 1054 (D. Colo. 1983) (in failure-to-warn action, statutory comparative fault applied only to damages, not to liability).

118. A similar two-part trial is presently conducted in first degree murder trials in Missouri. MO. REV. STAT. § 565.030 (Supp. 1983).

119. *Gustafson*, 661 S.W.2d at 15.

120. *See* Hudson v. Carr, 668 S.W.2d 68, 69 n.1 (Mo. 1984).

121. *Gustafson*, 661 S.W.2d at 15.

122. *Id.* at 18. Unif. Comparative Fault Act § 1(b), 12 U.L.A. 41 (1985 Supp.).

123. *See generally* Anderson & Bruce, *Recent Developments in Missouri Tort Law:* Gustafson v. Benda, 52 UMKC L. REV. 538, 543-44 (1984).

124. *Gustafson*, 661 S.W.2d at 19; Unif. Comparative Fault Act § 1, 12 U.L.A. 42 (1985 Supp.).

125. *Keener*, 445 S.W.2d at 365.

whenever its terms conflict with Missouri case law.[126]

It is more likely that the clear language of *Gustafson* signaled a departure from earlier case law[127] and that the "insofar as" language applies only if provisions of the UCFA conflict with Missouri statutory law.[128] Such a result is both logical and fair. Indeed, most jurisdictions that have considered the relationship between comparative fault and strict liability issue have decided to apply the principles of comparative fault in appropriate strict liability actions.[129]

Assuming that the Missouri Supreme Court will allow comparison of fault in strict liability actions, state-of-the-art evidence should definitely be admissible, not to determine liability initially, but in apportioning damages.[130] Under the UCFA in a strict liability action, the manufacturer of a defective product that is unreasonably dangerous can be held liable for harm caused by that product even though the manufacturer is in no way negligent. As the commissioners explained, "Putting out a product that is dangerous to the user or the public . . . involves a measure of fault that can be weighed and compared, even though it is not characterized as negligence."[131] Following that line of reasoning, state-of-the-art evidence would not be admissible as a defense against liability because the reasonableness of the manufacturer's conduct is not at issue.

If, however, the finder of fact decides that the plaintiff is also at fault, or that there are two or more defendants who are at fault, the situation changes. Evidence irrelevant as to liability is relevant in apportioning damages. UCFA section 2 (Apportionment of Damages) requires the finder of fact to determine the percentages of fault by considering the nature of the conduct of each party at fault as well as the causal relation between the conduct and the damages claimed.[132] The commissioners' comments recommend that the degree of fault

126. The defendant in *Keener* was held liable even though the plaintiff who was electrocuted was standing in ankle deep water and was not wearing either rubber boots or rubber gloves when he lifted the sump pump. *Id.* at 363-64.

127. *Gustafson*, 661 S.W.2d at 16. ("[W]e supplant the doctrines of contributory negligence, last clear chance, and humanitarian negligence with a comprehensive system of comparative fault . . . .").

128. The recently revised MO. REV. STAT. § 537.060 (1978), prescribing a method of apportioning a judgment against multiple tortfeasors when one defendant has obtained a release, conflicts with section 6 of the UCFA. Although the supreme court invited the General Assembly to reconsider the language of the statute, the court deferred to the terms of the statute. 661 S.W.2d at 15-16 n.10.

129. Daly v. General Motors Corp., 20 Cal. 3d 725, 144 Cal. Rptr. 380, 575 P.2d 1162, 1170 (1978) (listing the 30 states which had adopted some form of comparative fault). Today 40 states, Puerto Rico, and the Virgin Islands utilize some form of comparative fault. *Gustafson*, 661 S.W.2d at 13.

130. *Welch*, 555 F. Supp. at 1056 (statutory comparative fault applied only to damages, not to liability).

131. *Gustafson*, 661 S.W.2d at 19; Unif. Comparative Fault Act § 1, 12 U.L.A. 41 (1985 Supp.).

132. *Id.* at 43.

of the various parties be assessed by considering their conduct "depending upon all the circumstances." One of the circumstances mentioned is whether the conduct was mere inadvertence or was engaged in with awareness of the danger involved.[133] State-of-the-art evidence establishing that the dangerous defect was unknowable at the time of manufacture is definitely relevant in proving inadvertence.

It might be argued that such a consideration involves a negligence standard and thus has no place in a strict liability action. The comments suggest otherwise. As the commissioners explained,

> A rule of law . . . that no negligence is required is important in determining whether [the defendant] is liable at all. If the liability has been established, however, the rule itself does not play a part in determining the relative proportion of fault of this party in comparison with the others.[134]

The purpose of applying comparative fault principles to strict liability cases is to arrive at the fairest possible result.[135] The probability of achieving that result is far greater if the trier of fact can consider all the relevant information.

Suppose, for example, that the plaintiff, an experienced and cautious driver, gets into her car, locks the doors, fastens her seat belt, starts the car, and drives down the road. Just as her car reaches the crest of a hill, she sees a vehicle heading directly toward her on the wrong side of the highway. She starts to swerve to avoid the other vehicle, but she passes out. The two cars collide head on. Because of a design defect in her seat belt, the latch breaks when she is propelled forward, and she is thrown through the windshield. It is later determined that her fainting was caused by a prescription drug she had taken that morning for the first time.

Sometime later the plaintiff files a negligence action against the driver of the other car, and strict liability actions against the manufacturer of her car and the manufacturer of the medication. Assuming that the jury finds all the defendants liable, it then faces the difficult task of apportioning damages by comparing causation and fault.[136] Surely principles of fairness dictate that the jury be allowed to hear state-of-the-art evidence. What if the car manufacturer knew that safer seat belt designs were feasible? What if the drug manufacturer had conducted extensive research on that product for eight years, had read all the scientific information available, but did not know of the risk involved, because, given the state of the art in pharmaceutical research, the risk of fainting was unknowable until the plaintiff fainted?

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133. *Id.*

134. *Id.* at 44.

135. *See* Daly v. General Motors Corp., 20 Cal. 3d 725, ____, 144 Cal Rptr. 380, ____, 575 P.2d 1162, 1172 (1978).

136. Unif. Comparative Fault § 2, 12 U.L.A. 43-44 (1985 Supp.). The principles of comparative negligence come into play when the plaintiff is also at fault; those of comparative contribution when two or more defendants are found liable.

The holding in *Elmore* should not be interpreted to mean that state-of-the-art evidence will never be admissible in product liability actions. The decision to adopt a system of comparative fault in *Gustafson* was based primarily on the Court's desire to attain "fairness and justice" for both the plaintiff and the defendant.[137] That same desire will undoubtedly lead the Court to decide that Missouri law and sound social policy considerations require the admission of state-of-the-art evidence in a number of circumstances.

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137. *Gustafson*, 661 S.W.2d at 13. In explaining why it chose to reject the doctrine of last clear chance, the court quoted Prosser, *Comparative Negligence*, 51 MICH. L. REV. 465, 474 (1953):

> It is still no more reasonable to charge the defendant with the plaintiff's share of the consequences of his fault than to charge the plaintiff with the defendant's; and it is no better policy to relieve the negligent plaintiff of all responsibility for his injury than it is to relieve the negligent defendant.